

CLAIMS

1. A contactless reading system featuring contactless smart cards (14), each smart card being placed on an object (11) with the aim of identifying this object by means of identification data contained in the chip of the card, and a mobile reader (16) equipped mainly with an antenna to read said identification data, in which each smart card is fixed on a flat support of said object;

said system being characterized in that the antenna of said reader consists of a flat antenna support on which is fixed at least one turn of small dimension (24) in series with one turn of large dimension (26), said turns being concentric and having the same direction of winding, so as to obtain a maximum value of the component (H) of the electromagnetic field produced by the antenna parallel to said antenna support so that the reception by a smart card of electromagnetic signals transmitted by said antenna is maximum when said antenna support is placed perpendicular to said flat support of the card.

2. The contactless reading system according to claim 1, in which said turns of small dimension (24) and of large dimension (26) are circular turns.

3. The contactless reading system according to claim 2, in which the ratio between the diameter of the circular turn of large dimension and the diameter of the circular turn of small dimension is between 2 and 3.

4. The contactless reading system according to claim 3, in which said reader includes three simple antennae in series, each comprising a small turn (24) in series with a large turn (26), the antenna wire being wound so as to respect a symmetry of the resulting antenna and to obtain a uniformly distributed electromagnetic field according to radial symmetry (figure 5).

5. The contactless reading system according to claim 1, 2, 3, or 4, in which said contactless smart cards are fixed on a flat support of the object which is substantially parallel to a predefined plane such as a vertical plane.

6. The contactless reading system according to claim 5, in which said objects are books placed on shelves of a library.